

Work Order ID: 51886

Tuesday, September 08, 2009 3:16:19 PM

Page 1



Item ID: D350-748-201

Accept



Setup Start



Revision ID: D

Stop



Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 9/29/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

PMF

Date:

09-08

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

N/A

Rev D

100



DC

Document Control

DOCUMENT CONTROL

0.00

Memo

0.00

Photocopy bluefile & type labels per PPPD350-748-201

CHG001

5/10/05/11

110



CNC Bend 2

CNC Alpha 160 Bender

BENDING MACHINE - CROSSTUBES

Memo

0.00

Bend tube as per Dwg D350-748-241 using CNC bender program D350A and Folio FT

(X)

D

MB 10-01-14

120



QC

Quality Control

QC15- Crosstube Dimensional Check

Memo

0.00

0.00

CP 10.01.14

Work Order ID 51886

Tuesday, September 08, 2009 3:16:19 PM



Page 2

Item ID: D350-748-201

Accept



Setup Start



Revision ID: D

Stop



Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 9/29/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

130

0.00



Crosstubes

Crosstubes

Memo

0.00

1-Drill Tube as per Dwg D350-748-241 Using DT8876 Drill Jigs,
Set-up drill table as per QSI 010

2-Deburr

3-Engrave Part # and Batch # as per Dwg D350-748-241

4-Remove all marks from tube within limits of D350-748-241

5- Apply a light coat of LPS3 on the interior of tube

Batch: M107956

Handwritten notes:
MB 10-01-14
Q.A. 10-01-14
A.W.M 10-1-28

140

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

Handwritten note: B is engraved ✓

Handwritten note: 81010108

Handwritten note: 40

Abstract

Page 3



Stop

[illegible]

Customer:



Run Start

Stop

[illegible]

Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------------	---------------	------------------	----------------

0.00

Outsource3

Outsource process - Cad plate

Memo

Issue P/O: 11282
Stress relief at 375° for 5 hours
Magnetic Particle Inspect per ASTM E1444
Cadium Plate per AMS-QQ-P-416B, Class 1, Type 2
Embrittle relief at 375° for 8 hours, Chromate Treat
Possible Supplier: Southwest United Industries
Ensure Certificate of Conformity is attached

0.00

160

Receive & Inspect for Damage & Mat'l Certs

0.00

Packaging

Packaging

Memo

Ensure certificate of conformity is attached

0.00

170

QC5- Inspect part completeness to step on W/O . 0.00

0.00



QC

Quality Control

Memo

0.00

Work Order ID 51886

Tuesday, September 08, 2009 3:16:19 PM

Page 4

Item ID: D350-748-201

Accept

Setup Start

Revision ID: D

Stop

Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009 Start Qty: 1.00

Cust Item ID:

Required Date: 9/29/2009 Req'd Qty: 1.00

Customer:







Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 	SprayPaint	0.00					10	04	20 ①
SprayPaint	Memo	0.00							
Spray Painting	1-Prime inside crosstube as per QSI 005 4.2 2-Paint Outside of Tube as per Dart QSI 005 4.2								
190 	QC14- Inspect Spray Paint	0.00					10	04	21 ①
QC	Memo	0.00							
Quality Control	Then, Wrap in plastic bag to protect from scratches								
200 	Crosstubes	0.00					10	04	21 ①
Crosstubes	Memo	0.00							
Crosstubes	1-Install Ground wire Insert, then insert screw and washer 2-Install Abraison strips as per Dwg D350-748-241 & QSI 035. 3-Install supports Using Dt8876 as per Dwg D350-748-241, Torque to 60-80 IN-LBS								

Work Order ID 51886

Tuesday, September 08, 2009 3:16:19 PM

Page 5

Item ID: D350-748-201

Accept

Revision ID: D

Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009 Start Qty: 1.00

Required Date: 9/29/2009 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

QC5- Inspect part completeness to step on W/O

0.00

S.10/04/21

QC

Memo

0.00

(40)

Quality Control

220

Pick Kit

0.00

Packaging

Memo

0.00

10-4-28 SP

Packaging

230

QC4- 100% Inspect kits for completeness

0.00

QC

Memo

0.00

S.10/04/21

(40)

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D350-748-201 PAR #: WCR 10-026 Fault Category: Cross tubes. NCR: Yes ~~No~~ DQA: [Signature] Date: 10/05/11
 Resolution: Accepted Disposition: use as is QA: N/C Closed: [Signature] Date: 10/05/12

NCR: 57886		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
		NCR 10.026 → verify the cross tubes, to ensure they are good, from the cracking issue from above NCR	CP 10.05.10 per QSI 042	load test cross tube per David's email	[Signature] 10.05.10	CP 10.05.10 per QSI 042	[Signature] 10.05.10	[Signature] 10.05.10
			CP 10.05.10 per QSI 042	patch up / repaint as necessary per QSI 005 replace abrasion strip if required	ml 10.05.10	[Signature] 10/05/10	[Signature] 10.05.10	[Signature] 10.05.10

NOTE: Date & initial all entries

L Lacelle

From: David Shepherd [dshepherd@dartaero.com]
Sent: April 27, 2010 3:40 PM
To: 'Mike Petsche'
Cc: 'Bill Beckett'; 'L Lacelle'; 'Chris Provencal'; 'Dan Stow'; ssheldon@dartaero.com
Subject: 350 crosstubes

Mike,

I discussed the 350 crosstube load testing with Bill a little while ago and this plan makes sense to him.

So, my recommendation to clear these crosstubes is to load the fwd crosstubes to 3500 lb and the aft crosstubes to 3000 lb in the deflection test rig and document on the work orders that this test has been completed. Hold max load for 1 minute. Per TP-D350-748-2, these loads represent the maximum load on these crosstubes at gross weight and are below the yield point of the material. I would like to request that Chris Provencal witness these tests and sign off the work orders based on his experience with Dart landing gears. My feeling is that if there is a problem with the parts, it will manifest itself during this load test. I, for one, would feel a lot more confident in testing each crosstube in this manner than relying totally on what Exova has to say. I think it would be very difficult to reach a conclusion on the whole batch on the basis of cracks in two parts from the batch.

I believe that we can accomplish this before next Friday, which also gives us time to hear what Exova has to say in case it has an impact on our decision. So far, what I have seen from Exova shows me that there are fluctuations in the heat treating but the tubes are heat treated to our specification.

For this reason, I believe we should tell DHS that it looks like we will be able to start shipping 350 crosstubes by May 7th pending a successful Engineering test of the material.

David.

Work Order ID 51886

Tuesday, September 08, 2009 3:16:19 PM

Page 6

Item ID: D350-748-201

Accept

Revision ID: D

Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009 Start Qty: 1.00

Required Date: 9/29/2009 Req'd Qty: 1.00

Reference:

Cust Item ID:



Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240		0.00							
	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD350-748-201								
	Location: _____								
	PPP Rev: <u>A</u>								
250									
	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

POSITIVE RECALL

EFFECTIVE 10/11/11 AUTH WRELEASED W DATE 10/05/11see also NCR
EP's sign off

100511

W 1005.10

Picklist Print

Tuesday, September 08, 2009 3:16:27 PM

Work Order ID: 51886



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009

Required Date: 9/29/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D350-748- 241ERNRevD		Manufactured	No			110	Each	4.0000	1.0000			

D350-748-
241ERNRevD



B-48603 MB 10-01-14

Crosstube Turning Detail

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FG	4	
47167	1	
47170	1	
47171	1	
47172	1	

ALS4-1032-225

Purchased

No

200

Each

8,753.000 1.0000



Insert

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	8753	
107441	16	
<u>110768</u>	8737	

m/ 10.04.21

Picklist Print

Page 2 / 9

Tuesday, September 08, 2009 3:16:27 PM

Work Order ID: 51886



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft


Start Date: 9/9/2009

Required Date: 9/29/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD10  Washer		Purchased	No			200	Each	2,309.000	1.0000			

Q



m/ 10.04.21

<u>Warehouse</u> <u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
Main Warehouse		
ST	2309	
105442	95	
109059	2	
109840	23	
<u>110985</u>	202	
111279	13	
111668	70	
112314	1000	
112369	904	

D2856-400RevA

Manufactured No



Abraison Strip

200 f

332.4577 1.2432

4



<u>Warehouse</u> <u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
Main Warehouse		
ST	122.8077	
42437	44.93	
46543	77.8777	
Main Warehouse		
ST403	209.65	
50593	209.65	

B# 56626

m/ 10.04.21

1- cut as per dwg D2856

Tuesday, September 08, 2009 3:16:27 PM

Shop Packet Print

Page 2

Picklist Print

Page 3 / 9

Tuesday, September 08, 2009 3:16:27 PM

Work Order ID: 51886



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009

Required Date: 9/29/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3502-1RevB		Manufactured	No			200	Each	43.0000	2.0000			
Support												

B# 52903

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST	5	
41603	2	
42968	2	
47120	1	
Main Warehouse		
ST168	38	
50287	38	

m/ 10.04.21

MS21920-20

Purchased

No

200

Each

117.3000

2.0000



Clamp (per MIL-DTL-8783C)

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST	117.3	
103478	2	
106484	12	
109269	9.3	
110536	10	
111281	34	
112307	50	

B# 112793

m/ 10.04.21

Picklist Print

Tuesday, September 08, 2009 3:16:27 PM

Page 4 / 9

Work Order ID: 51886



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009

Required Date: 9/29/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS27039-1-10		Purchased	No			200	Each	37.0000	1.0000			
Screw												

B# 112794

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	37	
111425	37	

10.04.21

AN4-41A

Purchased

No

220

Each

142.0000

8.0000



Bolt

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	142	
105940	4	
110363	16	
110731	50	
111424	50	
112082	22	

10.4.28

Tuesday, September 08, 2009 3:16:27 PM

Shop Packet Print

Page 4

Picklist Print

Tuesday, September 08, 2009 3:16:27 PM

Work Order ID: 51886



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009

Required Date: 9/29/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN4-6A		Purchased	No			220	Each	814.0000	16.0000			
--------	--	-----------	----	--	--	-----	------	----------	---------	--	--	--



Bolt



M112829 10-4-28 SP

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 814

102602 3

105810 15

107534 1

109545 2

110399 27

111279 466

112314 300

AN5-32A

Purchased

No

220

Each

79.0000

4.0000



Bolt



M113121 10-4-28 SP

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 79

106242 3

106519 4

110363 17

111916 5

112082 50

Picklist Print

Tuesday, September 08, 2009 3:16:27 PM

Page 6 19

Work Order ID: 51886



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009

Required Date: 9/29/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD416		Purchased	No			220	Each	8,758.000	32.0000			

Washer  *1113706 10-4-28sf*

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	8758	
102929	2	
105906	4	
107321	23	
107939	114	
108161	553	
108827	31	
109249	69	
110523	340	
111279	115	
111916	2620	
112314	4887	
16941	0	

Picklist Print

Tuesday, September 08, 2009 3:16:27 PM

Page 7/9

Work Order ID: 51886



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009

Required Date: 9/29/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD516		Purchased	No			220	Each	1,209.000	8.0000			

Washer 1451149005637

M11370P 10-4-28 3P

Warehouse	Loc Qty	Loc Code
<u>Location</u>		
Main Warehouse		
ST	1209	
100564	2	
106167	6	
107534	34	
107959	43	
108246	46	
108672	2	
109059	49	
109752	22	
110363	46	
110523	57	
111279	43	
112082	359	
112314	500	

D3500-1RevC

Manufactured No



Saddle

220 Each 17.0000 4.0000

Warehouse	Loc Qty	Loc Code
<u>Location</u>		
Main Warehouse		
ST	17	
47119	12	
47350	5	

47119 10-4-28 3P

Picklist Print

Tuesday, September 08, 2009 3:16:27 PM

Page 8/19

Work Order ID: 51886



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 9/9/2009

Required Date: 9/29/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3501-1RevA		Manufactured	No			220	Each	423.0000	16.0000			



Bushing

10-4-28 SP

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

423

45402

19

45918

200

48268

204

MS21042L4

Purchased

No

220

Each

8,308.000

24.0000



Nut

M114108

10-4-28

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

8308

107499

5

110507

266

111827

5996

112314

2000

15924

0

8182

41

Picklist Print

Tuesday, September 08, 2009 3:16:27 PM

Page 9 / 19

Work Order ID: 51886



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft


Start Date: 9/9/2009

Required Date: 9/29/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21042L5 S  Nut		Purchased	No			220	Each	1,337.000	4.0000			

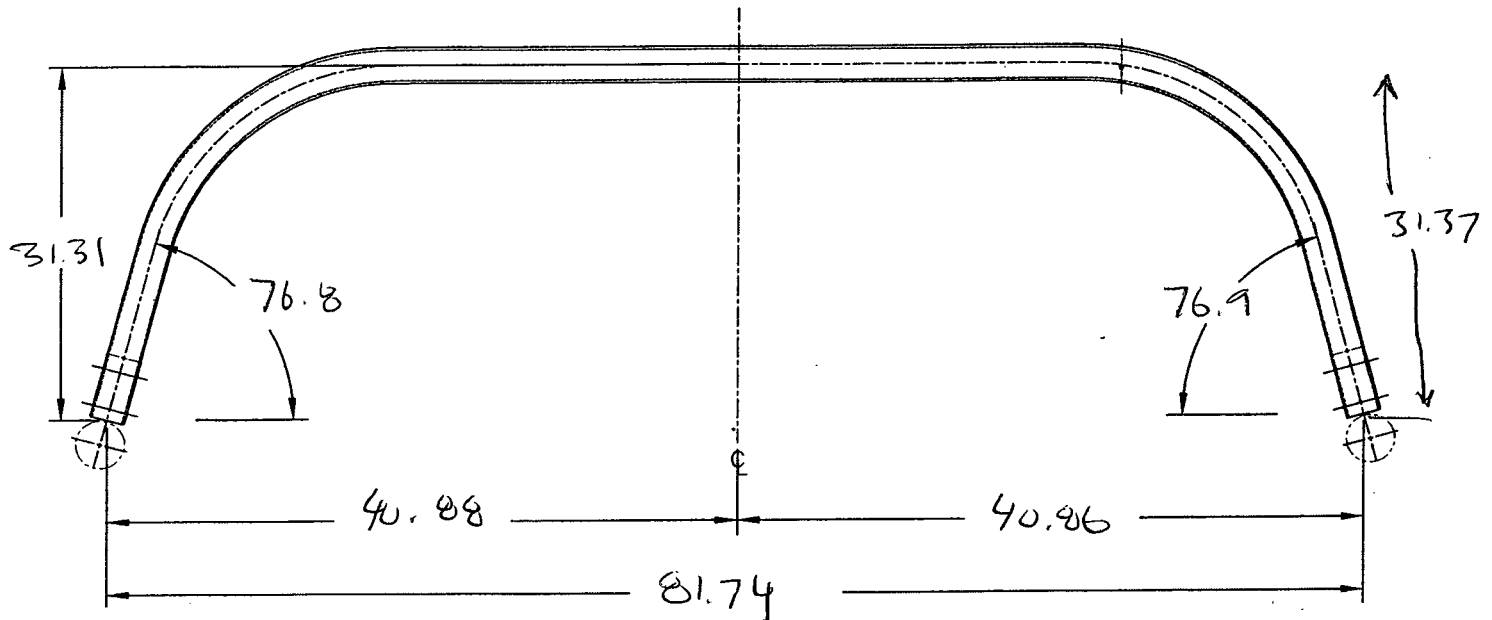


10-9-28 M113537 SP

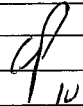
<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	1337	
110382	10	
111636	327	
112314	1000	

DART AEROSPACE LTD		Work Order: 51886
Description: Crosstube High Aft (AS350/355)		Part Number: D350-748-201
Inspection Dwg: D350-748-241 Rev: D		Page 1 of 1

Required Dimension	Min	Max
Height	31.22	31.48
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.54	82.06



Comments
Twist = 0.00"

QC15 Inspection	 10.01.14
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	



RELEASED

06.10.31

DESIGN 90	DRAWN BY 90	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D350-748-241	REV. D SHEET 1 OF 3
DATE 06.10.31		TITLE CROSSTUBE (AS 350/355 HI AFT)	SCALE NTS
A	06.03.31	NEW ISSUE	
B	06.06.30	ADD D6018-125 & PRIME AND PAINT	
C	06.08.14	ADD CAD PLATING	
D	06.10.31	MAG. PARTICLE AND CAD PLATE AS MFD.	

QTY	P/N	DESCRIPTION
X	D350-748-241	CROSSTUBE ASSEMBLY (AS 350/355 HI AFT)
1	D6018-125	CROSSTUBE (OR D6015-125)
2	D3502-1	SUPPORT
2	D2856-400-710	ABRASION STRIP
1	AELS-1032-225	INSERT
1	AN960JD10	WASHER
2	MS21920-20	CLAMP (PER DART SPEC. M-MS21920-20)
1	MS27039-1-10	SCREW

D350-748-141 CROSSTUBE:

- 1) MATERIAL: MANUFACTURED FROM D6018-125 OR D6015-125
FINISHED LENGTH = 122.70±0.06
- 2) MACHINE PER MACHINING DETAIL ON PAGE 3. BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITIONS SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 3) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 4) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 5) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING
- 6) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 7) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.
- 8) INSTALL D2856-400-710 ABRASION STRIP WITH A GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- 9) TORQUE MS21920-20 CLAMPS 60 TO 80 IN-LB
- 10) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 11) ALL DIMENSIONS ARE IN INCHES
- 12) PART IS SYMMETRIC ABOUT CENTERLINE EXCEPT FOR Ø0.297 HOLE.

UNDER REVIEW

09.02.05
PER PCR 09-001

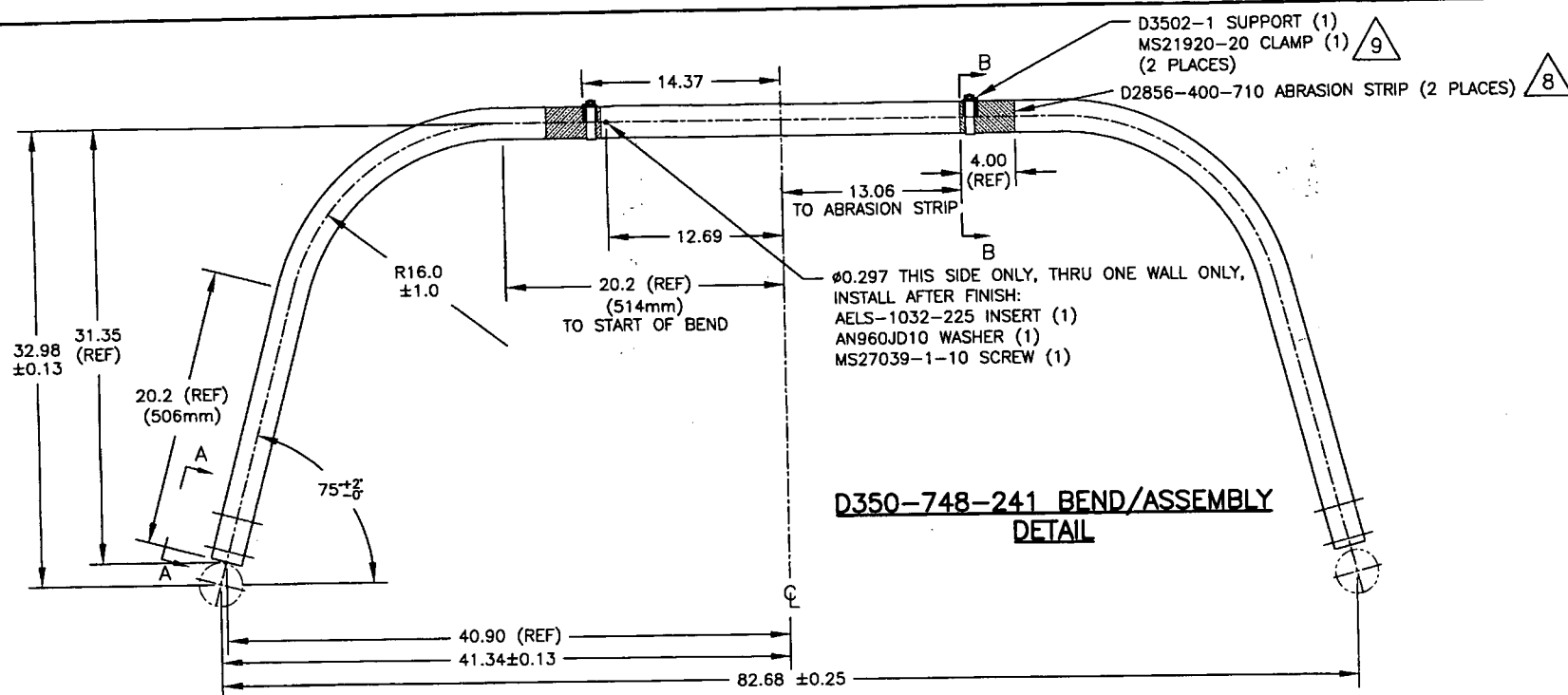
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 57886

UNDER REVIEW

07.02.16
OK 07.02.16

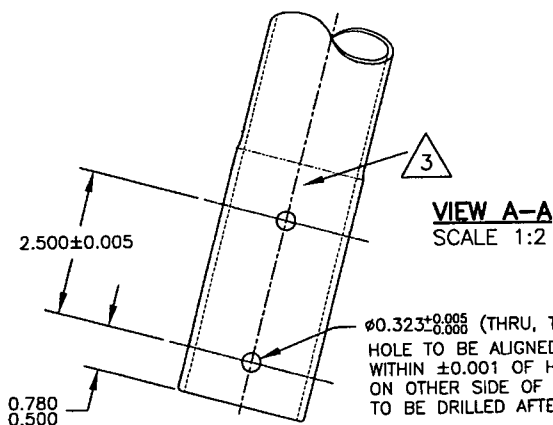
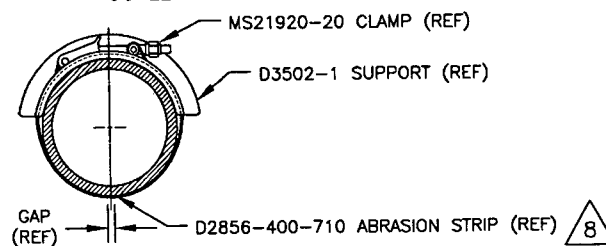
Copyright © 2006 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



D350-748-241 BEND/ASSEMBLY DETAIL

SECTION B-B SCALE 1:2



VIEW A-A SCALE 1:2

UNDER REVIEW

09.02.05

UNDER REVIEW

07.02.05

OK 10.10.05

RELEASED

06.10.31

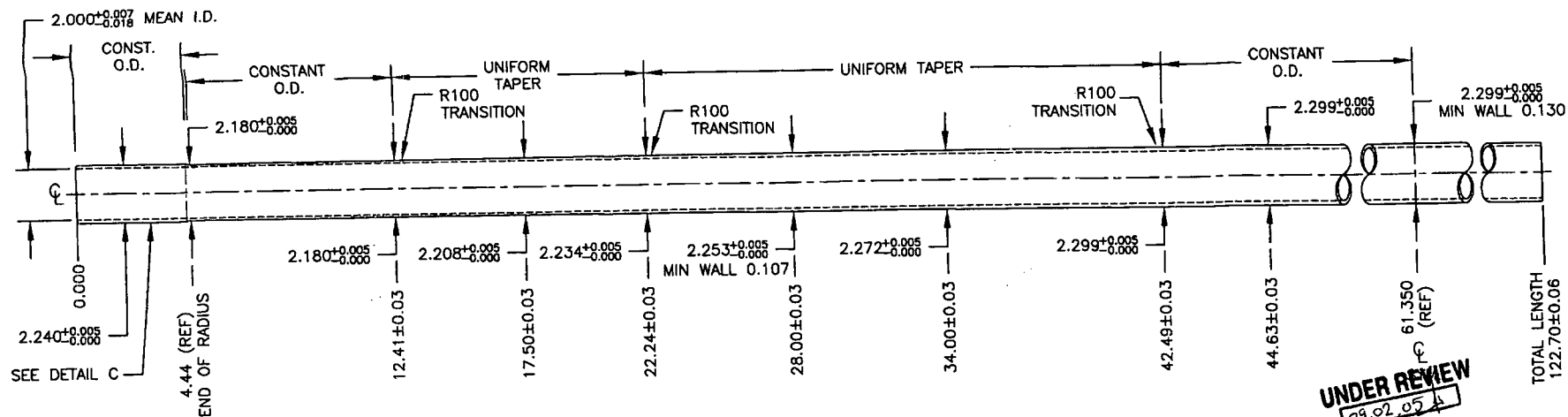
COPYRIGHT © 2008 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DESIGN	40	DRAWN BY	40	DART	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
CHECKED	#	APPROVED	#	DRAWING NO.	D350-748-241
DATE	06.10.31	TITLE	CROSSTUBE (AS 350/355 HI AFT)	SCALE	1:8

REV. D
SHEET 2 OF 3

51886

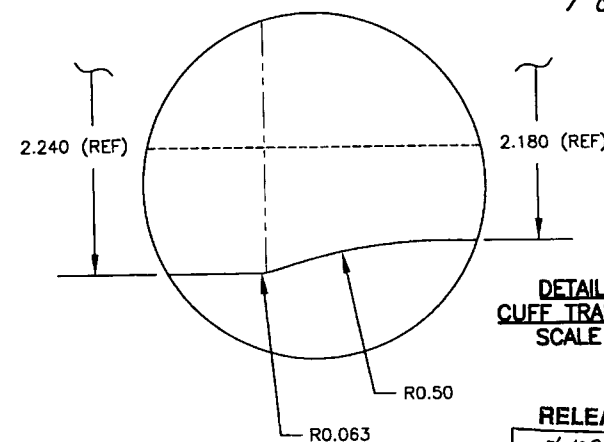
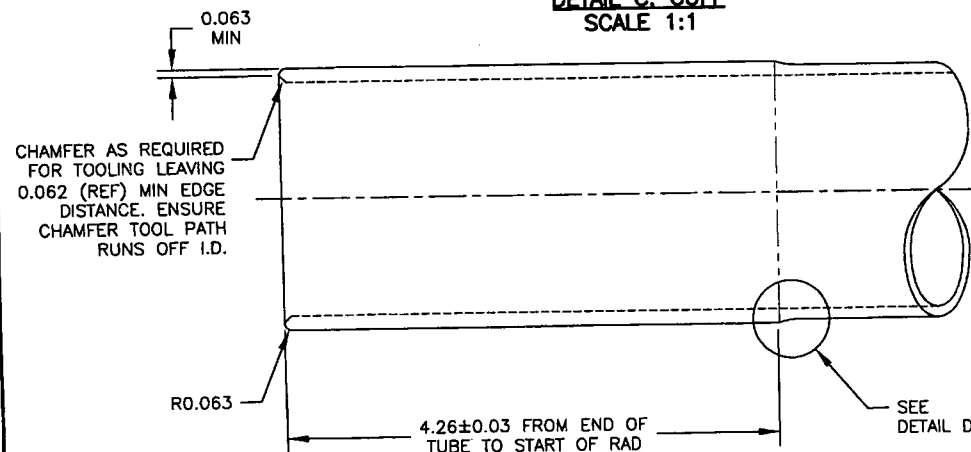


D350-748-241 MACHINING DETAIL

UNDER REVIEW
09.02.05

UNDER REVIEW
09.02.05
OK 09.20.22

DETAIL C: CUFF SCALE 1:1



DETAIL D: CUFF TRANSITION SCALE 9:1

RELEASED
06.10.31

COPYRIGHT © 2008 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DESIGN 9P	DRAWN BY 9P	DART	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
CHECKED #	APPROVED #	DRAWING NO. D350-748-241	REV. D SHEET 3 OF 3
DATE 06.10.31	TITLE CROSSTUBE (AS 350/355 HI AFT)	SCALE 1:4	

51886

**CERTIFICATE OF
CONFORMANCE**

**CADORATH PLATING CO. LTD.
2150 LOGAN AVENUE
WINNIPEG, MANITOBA R2J-0J1**

DATE: Feb-22-2010

**CONSIGNED TO: Dart Aerospace Ltd.
1270 Aberdeen St
Hawksbury, ON K6A 1K7**

W/O #: 93269

INVOICE #: 48326

**CONTRACT OR
PURCHASE ORDER # 513885**

DESCRIPTION: SKID

QTY 1

P/N # D350-748-201

S/N # B51886

**STRESS RELIEF BAKED @ 375 DEG. FOR 5 HRS. BAKE HEAT
CHART #10-116. MPI INSPECTED IAW ASTM-E-1444. CADMIUM
PLATED IAW AMS-QQ-P-416B, TYPE 2 YELLOW, CLASS 1. BAKE
HEAT CHART #10-169.**

**CERTIFICATE: I certify that the items indicated here on have
been inspected and tested and conform to all specifications
and requirements detailed on the contract or purchase order.**

Approved Inspector:



A large, stylized handwritten signature in black ink, written over a horizontal line.